

REMARKS

Claims 1-8 were pending in this application. Claims 1-4 and 7 have been withdrawn from consideration as being directed to a nonelected species of invention. Claims 5, 6 and 8 have been rejected. Claims 6 and 8 have been cancelled, and claims 9-16 have been added. Claim 5 has been amended. Claims 1 (withdrawn) and 5 are independent.

Claims 5, 6 and 8 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over European patent publn. no. 0 924 081 to Muto in view of U.S. patent no. 5,136,309 to Iida et al. Applicant respectfully traverses this rejection, and submits the following arguments in support thereof.

First, it will be appreciated that the cancellation of claims 6 and 8 renders moot the corresponding portions of this rejection.

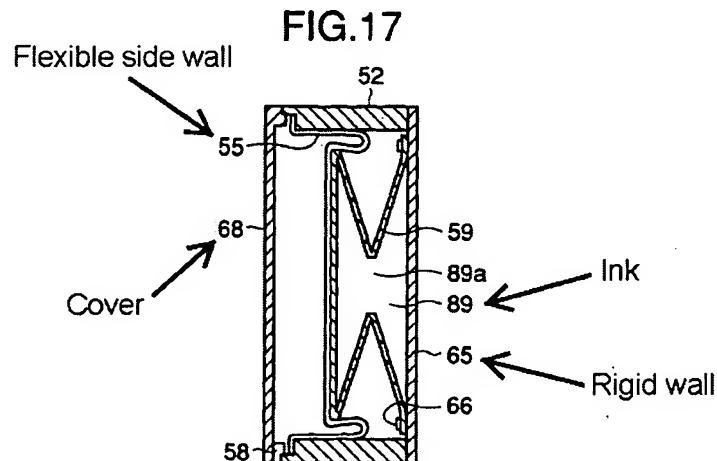
Claim 5 is drawn to a liquid storage unit having a liquid port, a gas port, a case, a liquid storage part for storing liquid and communicating with the liquid port, and a gas accommodation part accommodating a gas and communicating with the gas port. Also, there is an outer flexible partitioning member thermally welded to the case so as to define an inner space in cooperation with the case, and an inner flexible partitioning member thermally welded to a welding portion provided in the inner space so as to define the liquid storage part, and to define the gas accommodation part between the inner flexible partitioning member and the outer flexible partitioning member. By way of non-limiting example, these features will be particularly clear in view of Figure 6 of this application, and the corresponding portions of the specification.

Claim 5 involves, in part, an inner flexible partitioning member thermally welded to a welding portion provided in an inner space defined by an outer flexible partitioning member

and a case, and a gas accommodation part defined between the inner flexible partitioning member and the outer flexible partitioning member.

Muto fails to suggest such a gas accommodation portion. Nor is Muto's deficiency remedied by Iida. As will be shown, these references only teach structures with a single flexible internal member.

The Office Action relied on Figs. 15-17 of Muto. As shown in Figure 17 below (Figs. 15-17 all involve the same embodiment), Muto only teaches an ink cartridge with a flexible internal member that is flexible side wall 55 (the Office Action's reference to a first flexible partition member 89 is in error; element 89 is the ink, while element 55 is a flexible side wall (paragraphs [0008], [0058])). Outer wall 65 is identified as the rigid wall. Element 68 is the cover, and is not identified as being flexible. Given Muto's characterization of the cover as "a cover 68 is mounted to the ink container 51 to **protect** the side wall 55 from the environment" (paragraph [0053], emphasis added) it is submitted that one of ordinary skill in the art would regard Muto's cover 68 as rigid, not flexible, since a rigid cover would provide such protection). Consequently, Muto has no teaching that suggests to one of ordinary skill in the art that cover 68 is flexible.



Consequently, Muto fails even to suggest an outer flexible partitioning member that, with the inner flexible partitioning member, defines a gas accommodation part, as claimed. In fact, because Muto teaches that the wall 65 is a rigid wall, and one of ordinary skill in the art would consider cover 68 to be rigid, Muto teaches away from the claimed invention.

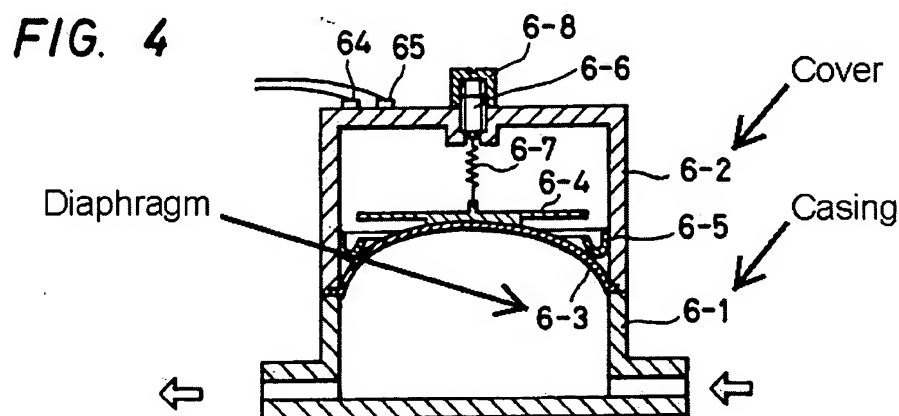
Muto fails to suggest the claimed invention for still another reason. It is clear from paragraphs [0058]-[0064] of Muto that Muto's ink cartridge, as ink 89 is consumed, develops negative internal pressure in the adjoining region on the other side of the flexible side wall 55, meaning that portion is isolated from the atmosphere. It therefore also will be understood that Muto fails to suggest a gas port as claimed, and a gas accommodation part communicating with the gas port as claimed.

Iida teaches an device which measures the residual quantity of ink in a printer using an ink cartridge (cols. 1-3; Figure 3). It is clear from Figure 3 that the ink quantity detecting apparatus 6 is part of the printer, not part of the sub-ink tank 4.

The portions of Iida cited by the Office Action are directed to structure of the residual ink quantity detection apparatus, not structure of an ink cartridge. The Office Action provides no justification as to why one of ordinary skill in the art would apply teachings of Iida that concern part of the printer to the structure of an ink cartridge.

It is respectfully submitted that one having ordinary skill in the art, combining the cited references, would simply take the printer structure taught by Iida, having a residual ink quantity detection apparatus, and modify the sub-ink tank 4 to include the cartridge structure of Muto. That in no way leads to the claimed invention.

Even assuming *arguendo* one of ordinary skill would extend Iida's teachings to an ink cartridge, Applicant submits that still does not suggest the present invention because both Iida and Muto teach substantially the same structure. The Office Action asserts that Iida teaches a flexible partition member 6-3 bonded to case 6-1 by adhesion or other techniques. However, Iida's flexible partition member is comparable in position and function to Muto's flexible side wall; as shown in Figure 4 of Iida, reproduced below, that internal wall, diaphragm 6-3, is located inside the residual ink quantity detection apparatus, and is covered by cover 6-1 (col. 6, lines 48-57):



In Iida, neither the casing 6-1 nor the cover 6-2 are said to be flexible (one of ordinary skill in the art would regard Iida's casing and cover to be rigid since Iida states at col. 6, lines 50-51, that the casing and cover are bonded by screws, among other techniques, and those having ordinary skill in the art would understand that both structures must be rigid in order to secure those screws). Only diaphragm 6-3 is flexible.

Iida therefore at most teaches a structure comparable to the above-mentioned structure of Muto; in both references, a flexible member is arranged between rigid members.

Accordingly, even when Iida and Muto are combined they still fail to suggest at least the aspects of claim 5 involving the inner flexible partitioning member that is in the inner space defined by the outer flexible partitioning member and case, or that there is a gas accommodation part between the inner flexible partitioning member and the outer flexible partitioning member.

This rejection also is in error for failing to justify the combination of Muto and Iida. For such justification, the Office Action merely asserts "it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Muto with the first flexible partition member thermally welded to the case, in view teaching [sic] of Iida et al., to bond the flexile [sic] partition member to the case." (Office Action, pg. 3).

However, this assertion is erroneous, and this rejection is further traversed, because the Office Action fails to make the factual findings which are required to support an obviousness rejection under 35 U.S.C. § 103(a) and to support the asserted combination.

In particular, the Office Action fails to make any findings of fact regarding the level of ordinary skill in the art at the time of invention. Such a finding is one of the three different factual findings that the Patent and Trademark Office requires for an obviousness rejection under 35 U.S.C. § 103(a). Specifically, the Patent and Trademark Office's Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in KSR International Co. v. Teleflex Inc., 72 Fed. Reg. 57526, 57527 (October 10, 2007) (hereafter "KSR Guidelines"), incorporated into M.P.E.P. § 2141 (8th ed., rev. 6), state:

[a]s reiterated by the Supreme Court in KSR, the framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in Graham v. John Deere Co. (citation omitted) Obviousness is a question of law based on underlying factual inquiries. The factual inquiries enunciated by the Court are as follows:

- (1) Determining the scope and content of the prior art;
- (2) Ascertaining the differences between the claimed invention and the prior art; and
- (3) **Resolving the level of ordinary skill in the pertinent art.**

(emphasis added). This portion of the KSR Guidelines is reflected in M.P.E.P. § 2141(II) (8th ed., rev. 6).

The Office Action fails to comply with the KSR Guidelines; no findings were made with regard to the level of ordinary skill in the art at the time this invention was made. Applicant respectfully submits that such a finding is particularly important here because the Office Action did not provide any reasoning to justify the combination of references. Any determination as to whether references can be combined must be made from the viewpoint of the person having ordinary skill in the art, so it is incumbent upon the Office Action to provide sufficient findings to establish the qualifications of the person having ordinary skill in the art. That was not done here, meaning the Office Action fails to comply with the KSR Guidelines.

The KSR Guidelines state "[i]n certain circumstances, it may also be important to include explicit findings as to how a person of ordinary skill would have understood prior art teachings, or what a person of ordinary skill would have known or could have done" id. at 57527. This is reflected in M.P.E.P. § 2141(II) (8th ed., rev. 6). It is respectfully submitted that this application presents precisely the type of situation where the KSR Guidelines and the M.P.E.P. encourage the setting forth of thorough factual findings regarding the level of ordinary skill in the art.

It is further submitted that, in the event factual findings are made as to the level of ordinary skill in the art, the determined level of ordinary skill in the art will not be sufficiently high to

justify the Office Action's reasoning in contending that a person having ordinary skill in the art would combine Muto and Iida to arrive at the claimed invention.

For all the foregoing reasons, Applicant respectfully submits that the Office Action has failed to establish a *prima facie* case of obviousness. Accordingly, favorable reconsideration and withdrawal of this rejection are respectfully requested.

Claims 5, 6 and 8 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent no. 7,152,965 to Ishizawa et al. in view of Muto and Iida. Applicant respectfully traverses this rejection and submits the following arguments in support thereof.

First, it will be appreciated that the cancellation of claims 6 and 8 renders moot the corresponding portions of this rejection.

Second, the Office Action impermissibly relies upon Ishizawa¹ -- such reliance is barred by 35 U.S.C. § 103(c)(1), which provides:

Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the claimed invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Since this application has a U.S. filing date of February 19, 2004, Ishizawa, which has a patent issuance date of December 26, 2006, and filing date of January 22, 2001, only qualifies as prior art under 35 U.S.C. § 102(e).

¹ Admittedly, this rejection could have been based upon Ishizawa's U.S. patent appln. publn. no. 2001/0024225, published on September 27, 2001 ("the published Ishizawa application") and so Applicant will later address this possibility.

Ishizawa and the subject application are commonly assigned; as evidence of the common ownership at the time of the claimed invention, Applicant submits herewith at Exhibit A a Patent Assignment Abstract of Title obtained from the U.S. Patent and Trademark Office's records for the assignment recorded against the subject application, and, at Exhibit B, a Patent Assignment Abstract of Title obtained from the U.S. Patent and Trademark Office's records for the assignment recorded against Ishizawa.

In view of the respective dates of the assignments reflected in these papers, it is clear that Ishizawa and this application were owned by the same person, or subject to an obligation of assignment to the same person, at the time the claimed invention was made, and so § 103(c)(1) precludes the application of Ishizawa in a rejection under 35 U.S.C. § 103(a).

In the interests of efficiency, Applicant will now explain why the claims patentably distinguish over the cited art in the event patent application publication no. 2001/0024225 corresponding to the Ishizawa patent were to be substituted for the Ishizawa patent.

In part, claim 5 provides for an inner flexible partitioning member thermally welded to a welding portion provided in the inner space so as to define the liquid storage part, and to define the gas accommodation part between the inner flexible partitioning member and the outer flexible partitioning member. The published Ishizawa application fails to suggest such an inner flexible partitioning member.

The Office Action equates Ishizawa's ink pack 124 to a flexible partition member attached to the case (Office Action, pg. 3). However, the Office Action errs because claim 5 provides that the inner flexible partitioning member is welded to the welding portion provided in

the inner space defined by the case and the outer flexible partitioning member. The published Ishizawa application only teaches that the ink pack 124 is made from two sheets of flexible material with welded sides (paragraph [0292] and that the ink pack 124 is housed in the lower case 142 and is held by the intermediate lid 143 without any mention of welding in the manner claimed (paragraph [0296]-[0298] and Figure 16).

In fact, one having ordinary skill in the art would be led by the published Ishizawa application away from the claimed invention - as shown in Figure 16, this reference would teach that person to contain flexible material within the ink cartridge by securing the flexible material between two facing structures so as to be held in place by pressure from the facing structures. This is entirely different from and not suggestive of the claimed invention.

Muto and Iida have been discussed and distinguished above in Applicant's response to the foregoing rejection, and reference is made to those points of distinction.

This rejection also is in error and must be withdrawn because the Office Action provides no factual findings or reasoning as to why one skilled in the art would combine the Ishizawa, Muto and Iida references in a way that would lead to the claimed invention. The Office Action only states at page 3 "it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Ishizawa et al. with the first flexible partition member thermally welded to the case, in view [sic] teaching of Muto and Iida et al., to securely bond the flexile [sic] partition member to the case."

Nor is there any factual finding as to the level of ordinary skill in the art in connection with this rejection.

For all the foregoing reasons, favorable reconsideration and withdrawal of this rejection are respectfully requested.

CONCLUSION

Applicant respectfully submits that all outstanding rejections have been addressed and are now overcome. Applicant further submits that all claims pending in this application are patentable over the prior art. Accordingly, favorable consideration and prompt allowance of this application are respectfully requested.

No fees are believed to be due in connection with the filing of this paper. Nevertheless, should the Commissioner deem any additional fee(s) to be now or hereafter due in connection with this application, authority is given to charge all such fees to Deposit Account No. 19-4709.

In the event that there are any questions, or should additional information be required, please contact Applicant's attorney at the number listed below.

Respectfully submitted,

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